



NOAA Teacher at Sea
Jim Jenkins
Onboard NOAA Ship MILLER FREEMAN
April 18 - 30, 2005

Day 6: April 23, 2005
Latitude: 56, 53, 18 N
Longitude: 164, 04, 72
Visibility: 12 Nautical miles
Wind Direction: 345
Wind Speed: 2 Knots
Sea Wave Height: 1 Foot
Sea Wave Swell: 1-2 Feet
Sea Water Temperature: 2.5 Degrees C
Sea Level Pressure: 1023.3 millibars

Science and Technology Log:
Get the microscopes ready!

Early this morning, I helped out with dropping and pulling up Calvets nets. These nets collect fish eggs and other small life forms from the sea. Specimens collected are put in jars, preserved with formaldehyde and sent to labs for analysis. This is a quantitative sample, meaning that each test is designed to get a good idea of the amount of fish eggs in a specific amount of water. In this case, the test measures eggs in a 100 cubic meter area. Specimens are filtered through a screen to eliminate most of the water. Screens are then rinsed to make sure all the netted material goes into the specimen bottle.



Mr. Jenkins helps to retrieve a Calvets net

Knowledge of the amount of fish eggs present in water can help make predictions about the health of fish populations. It can also help fishermen plan for the future.

This morning we ran an extra test and I collected the contents of the net to bring back to Mountain View Elementary. There were a lot of cocopods and some tiny worms visible to the naked eye in our specimen. Other portions of the collected specimen were squirming with life, but I could not make them out with just my eye. Let's make looking at this specimen under the microscope the first activity that we do when I return to school.

The mooring named Peggy that I wrote you about earlier went into the water this morning. This was a complicated procedure. A couple of hours were spent "building" a chain with all the instruments which hang down to the bottom below this mooring. All of the instruments needed to be bolted to specific lengths of chain with shackles. The assembly was done according to a diagram drawn in Seattle. The total length of all the chains and instruments joined together was 67 meters long. Instruments used to gather data on temperature, salinity and nitrate levels at various depths were attached.

Once the chain was assembled, the whole assembly was lowered into the ocean as the times that each instrument hit the water were recorded. One end of the chain was joined with a shackle to the mooring and it is ALMOST ready to go



You can see how big Peggy the Mooring is with Mr. Jenkins standing in front of it!

Peggy, the mooring, is so big that it was a complicated job to get it into the water. Two winches, several rope lines, a lot of communication and thinking were necessary to get it into the sea. About an hour after the process began, Peggy touched down lightly in the sea. A big cheer went up from everyone on the deck!

Finally, the anchor needed to be attached to the bottom of the chain and

dropped into the water. In this case, the anchor was not the railway wheels that you have heard about so often.

This anchor resembled half of a Tootsie Roll Pop lying round side up and it was bright yellow. The exterior was made of concrete. A big mooring needs a big anchor! The anchor for Peggy weighed in at 5,000 pounds! (This is equivalent to 2 and one-half small cars).

How did an anchor this big get from the deck into the water? Again, it took considerable thinking and communication between deck hands and scientists. Communication between people on the deck and officers on the bridge was also extremely important so that the ship was in the right location. The cooperation, thinking and communicating paid off. Finally, Peggy the mooring, settled into the sea!

I took many photographs of the process of putting the mooring into the sea as well as a farewell photograph as the ship pulled away. These will be sent to you later today and will be there by Monday when you return to school.

By the way, another small mooring was put in right after lunch. Now we have an 18-hour transit before reaching the site of deployment of the marine mammal listening device brought up by Chris Garsha and Lisa Munger that we discussed earlier.

Personal Log:

I hope you guys had a great weekend!

Did you receive the photo of Rusty the ship's cat? Well, I also sent copy of the



Rusty and Mr. Jenkins

photo to my home. My wife, Chantel, just wrote to advise that our son, Sam, climbed up in her lap when he saw the photo on the computer screen to give a big kiss to both his dad and to Rusty. Needless to say, this was a heartwarming message for me!

Question of the Day: What is at the center of the yellow concrete anchor used for the mooring named Peggy? (Hint: Reading previous logs might help you with this answer.) This “easy as candy” question comes to you in honor of the weekend! (Very Big Grin!)